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Nebraska Tractor Tests

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Larsen

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January 1931

## Test 198: McCormick-Deering Farmall "F-30"

Tractor Museum

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UNIVERSITY OF NEBRASKA. - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Corrected Copy of Report of Official Tractor Test No. 198

Dates of test: October 9 to 23, 1931.

Name and model of tractor: McCORMICK-DEERING FARMALL "F 30"

Manufacturer: International Harvester Co., Chicago, Ill.

Manufacturer's rating: NOT RATED.

Highest rating permissible under the recommendations of the A.S.A.E. and

S.A.E. Tractor Rating Codes: Drawbar - 20.27 H.P. Belt - 30.29 H.P.

One carburetor setting (97% of maximum) was used thruout this test.

B R A K E H O R S E P O W E R T E S T S

H. P.	:Crank : :shaft :	Fuel Consumption	:	Water Consumption	:	Temp.	:
				per hour gallons		Deg. F.	:Barometer
:speed :	Gals. :	H. P. :	Lbs. per :	Cool- : In :		:Cool-:	:Inches of
:R.P.M.:	per :	hrs. per:	H. P. :	ing : fuel : Total :		:ing : Air :	:Mercury
:	: hour :	: gal. :	: hour :	:	:	:med. :	:

OPERATING MAXIMUM LOAD TEST. ONE HOUR

32.80 : 1150 : 3.414 : 9.61 : 0.704 : 0.00 : 0.00 : 0.00 : 182 : 76 : 28.820

RATED LOAD TEST. ONE HOUR

30.31 : 1150 : 3.327 : 9.11 : 0.742 : 0.00 : 0.00 : 0.00 : 191 : 75 : 28.785

\*VARYING LOAD TEST. TWO HOURS

30.21	: 1150	: 3.182	:	9.49	: 0.712	:	--	:	--	:	--	:	184	:	70	:	--
0.73	: 1313	: 1.558	:	0.47	: 14.425	:	--	:	--	:	--	:	178	:	71	:	--
16.44	: 1244	: 2.601	:	6.32	: 1.069	:	--	:	--	:	--	:	180	:	72	:	--
33.92	: 1140	: 3.484	:	9.74	: 0.694	:	--	:	--	:	--	:	178	:	72	:	--
8.63	: 1288	: 2.104	:	4.10	: 1.648	:	--	:	--	:	--	:	181	:	74	:	--
23.11	: 1197	: 2.929	:	7.89	: 0.857	:	--	:	--	:	--	:	181	:	73	:	--
19.52	: 1222	: 2.643	:	7.39	: 0.915	:	0.00	:	0.00	:	0.00	:	180	:	72	:	28.975

\*20 minute runs. Last line is average for two hours.

D R A W B A R H O R S E P O W E R T E S T S

H. P.	: Draw :	Speed :	Crank :	Slip :	Fuel Consumption	:	Water:	Temp. :
	: bar :	Miles :	shaft :	on :	: H. P. :	Lbs. :	used :	:Barometer
: pull :	per :	speed :	drive:	Gal.:	hour :	per :	Gal. :	:Cool-:
:pounds:	hour :	R.P.M.:	wheels:	per :	per :	H.P. :	per :	:ing :Air:
:	:	:	% :	hour:	gal. :	hour :	hour :	:med. :

RATED LOAD TEST. TEN HOURS. Second GEAR

20.88 : 2520 : 3.11 : 1150 : 3.44 : 3.152 : 6.62 : 1.024 : 0.053 : 175 : 69 : 28.580

MAXIMUM LOAD TEST

24.85	: 4157	: 2.24	:	1152	: 9.70	:	Not Recorded	:	175	:	58	:	28.720
23.93	: 2953	: 3.04	:	1151	: 6.54	:	" "	:	168	:	67	:	28.600
23.04	: 2327	: 3.71	:	1151	: 5.23	:	" "	:	175	:	68	:	28.600
22.00	: 1849	: 4.46	:	1145	: 4.34	:	" "	:	174	:	68	:	28.600

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. A A 518 Type 4 cylinder, vertical  
Head I Mounting Lengthwise  
Bore and stroke: 4 1/4" x 5" Rated R.P.M. 1150  
Port Dia. Valves: Inlet 1.697" Exhaust 1.479"  
Belt pulley: Diam. 14 5/8" Face 7" R.P.M. 682  
Magneto: Own Model E 4 A  
Carburetor: Zenith Model K 5 Size 1 1/4"  
Governor: Own No. None Type Centrifugal  
Air Cleaner: Own Type Oil-washed wire filter  
Lubrication: Splash with circulating pump

CHASSIS: Type 4 wheels Serial No. F B 517 Drive Enclosed gear  
Clutch: Own Type Single plate-dry Operated by foot  
Advertised speeds, miles per hour: First 2 Second 2 3/4  
Third 3 1/4 Fourth 3 3/4 Reverse 2 1/2  
Drive wheels: Diameter 42" Face 12"  
Lugs: Type Spade No. per wheel 24 Size 5" high x 3 1/2" face  
Extension rims: Width 6" Lugs: 12 per rim Size 5" high x 3 1/2" face  
Seat: Pressed steel  
Total weight as tested (with operator) 5990 pounds.

FUEL AND OIL:  
Fuel: Kerosene Weight per gallon 6.78 pounds on rated drawbar tests  
Oil: S.A.E. Viscosity No. 30  
Total oil to motor 6.949 gallons  
Total drained from motor 7.825 gallons  
Total time motor was operated 66 hours

The oil was drained to the middle cock and refilled to top cock after approximately each 10 hours of operation. After 55 hours, all the oil was drained. Again at the end of the test all the oil was drained.

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REPAIRS AND ADJUSTMENTS

The pin, which holds the splined end of the steering rod in the splined sleeve, sheared off twice, once during the limber up run and again during the rated load drawbar test. Each time the pin was replaced by another.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged thruout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

The drive wheels were equipped with spade lugs and extension rims and lugs as listed on Page 2 of this report.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 198.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis

Board of Tractor Test Engineers